This briefing discusses the impacts of immigration on population growth and diversity in Western European and other high-income countries. Migration has become the primary driver of demographic change in most high-income countries and may remain so. On current trends European populations will become more ethnically diverse, with the possibility that today’s majority ethnic groups will no longer comprise a numerical majority in some countries. However, it cannot be assumed that current trends will continue, as migration is the most volatile element in demographic change. Migration trends change, and politics may intervene to change them.

**Key Points**

Net international migration is now the dominant element in population change in most Western European countries and in parts of the ‘Anglosphere’ (USA, Canada, Australia, New Zealand), exceeding natural increase considerably and in some countries approaching the annual total addition to the population from births.

By the 1980s immigration and related natural population growth had increased the populations of foreign-born people and their children in many Western European countries. By about 2010, people with ‘immigrant origins’—that is first or second generation foreign origin—comprised between 10–20% of the population in many Western European countries.

Projections of the future population of immigrant origin or ethnic minority status have been prepared for about a dozen developed countries. These projections indicate that populations of post-war immigrant origin will comprise between 20–40% of national population totals by the middle of the 21st century if recent migration trends persist.

A growing number of people identify themselves as having mixed ethnic origins. The increasing complexity of multiple ancestry, and the social and subjective elements of ethnic self-identification, may make ethnic or foreign-origin based distinctions within populations increasingly problematic.
Understanding the evidence

Classifying people according to their ethnic origin or immigrant background is tendentious and difficult, but widely practised (see the Migration Observatory briefing “Who Counts as a Migrant? Definitions and their Consequences”). This is in part due to difficulties in defining both ‘immigrant’ and ‘ethnicity’. The most commonly used definition of ‘immigrant’ is a person born outside a given country who has moved to live in that country. The UN defines an international migrant as a person who enters another country intending to stay there for at least a year, having been absent from it for at least a year. On that widely used definition it would include persons born abroad whose parents emigrated earlier from the country of destination.

Definitions of ethnicity often include multiple concepts including but not limited to members’ self-definings as well as more external or ‘objective’ concepts such as a shared history, territory, ancestry, or nationality. For example, Bulmer’s (1996) much-cited definition: “An ethnic group is a collectivity within a larger population having real or putative common ancestry, memories of a shared past, and a cultural focus upon one or more symbolic elements which define the group’s identity, such as kinship, religion, language, shared territory, nationality or physical appearance. Members of an ethnic group are conscious of belonging to an ethnic group.”

Ethnicity is measured in the UK Census and other official data sets by asking individuals to select among categories that may include nationality (Chinese, Indian, Irish), broader geographic or ancestral categories (African, Asian, Arab), colour (e.g. White, Black), and combinations of these (‘White Irish’, ‘White British’), including explicitly ‘mixed’ categories (‘White and Black Caribbean’) (Afrikhami 2012).

Evaluating the increasing diversity of ethnic origin in many developed countries, and its relationship with migration requires further information beyond birthplace and citizenship, insofar as the descendants of immigrants continue to constitute distinct identity groups. Many continental European countries officially classify persons of ‘foreign origin’ or ‘foreign background’ through their population registers. These are usually defined as persons born abroad originally of foreign citizenship, together with persons born in the host country whose parents were themselves born abroad and were foreign citizens. In ‘Anglosphere’ countries (i.e. UK, USA, Canada, Australia, New Zealand) lacking population registers, censuses and surveys typically ask individuals to identify themselves according to a list of ethnic origin categories as well as by birthplace and citizenship. These categories have expanded over time. In the US separate questions in the Census and other official data sources enquire about race, Hispanic origin and ancestry including multiple ancestry. In the UK, government data sources such as the Census and Labour Force Survey include questions about ethnic group, ancestry and religion and, in the 2011 census, concerning the passport held, as a surrogate for citizenship.

Projecting future ethnic diversity involves population projections. Such projections are usually performed by the cohort-component method – a form of demographic accounting which takes forward in time the existing population separately for each age-group and sex according to age-mortality and migration rates, specific to each group. Births are added according to age-specific fertility rates and their assumed future trend (see the Migration Observatory briefing on “The Impact of Migration on UK Population Growth”). Difficulties with these data and assumptions can easily be imagined, and are considered in the section on ‘Evidence gaps and limitations’ at the end of this briefing. The Office for National Statistics (ONS) publishes population projections for the whole UK every two years, the latest being based upon 2010 (ONS 2011). Subnational projections are also available. In this briefing all projections pertaining to Britain relate to the UK (i.e. England, Scotland, Wales and Northern Ireland).
Migration dominant in population dynamics

Birth rates in developed countries are relatively low, equivalent to a family size (total fertility) of no more than two and in some Southern and Eastern European country are not more than about 1.4. Natural increase, the excess of births over deaths, is moderate. It is highest in the ‘Anglosphere’ and North-West Europe, including the UK. In Italy, Germany, Japan, Russia and some other countries it is negative, i.e. deaths exceed births. Net immigration contributes an important part of population growth of ethnic minority populations. In most Western countries, net immigration, together with the natural increase of the immigrant populations, accounts for most or all of overall population growth. In others, it moderates the pace of population decline. Immigration adds to the population growth arising from natural increase in the US and other ‘Anglosphere’ countries (Canada, Australia, New Zealand), and in France, the UK and a few other NW European countries. Immigration also contributes substantially to the numbers of births. In England and Wales, France and Germany, for example, approximately 25% of all births are now from foreign-born mothers.

As shown in Figure 1 below, with the exception of the usual two demographic outliers of Iceland and Ireland, the rate of natural increase in all European country in 2011 was 0.4 per thousand or below. Net immigration, however, contributed up to 0.9% of population growth in a few countries.

Figure 1

Crude rate of natural change and crude rate of net migration plus statistical adjustment, selected European countries 2011. Source: Eurostat.

In some countries in recent years (e.g. Switzerland, Norway, see Table 1 below) the annual contribution of migrants to the national population (net of emigration) has been almost as great as the total number of live births in each year, and much greater than natural increase. In 2011, annual net immigration to four European countries in Table 1 was over 40% of the total number of live births (from 43% in Germany to 81% in Switzerland). Similar proportions obtained in Australia and Canada. In Western Europe, among larger countries only France and Spain had notably low proportions. The volatility of migration is emphasised by the diminution of the ratio of net immigration to live births in the Spanish population from 144% in 2007, following a substantial downturn of inflows amidst economic recession.
Table 1 - Population, natural increase, live births, net migration, selected developed countries 2011

<table>
<thead>
<tr>
<th>Country</th>
<th>Population 1 Jan 2011</th>
<th>Live births</th>
<th>Natural increase</th>
<th>Net migration</th>
<th>Net migration as % of births</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switzerland</td>
<td>7,870</td>
<td>81</td>
<td>18</td>
<td>68</td>
<td>81</td>
</tr>
<tr>
<td>Norway</td>
<td>4,920</td>
<td>60</td>
<td>19</td>
<td>47</td>
<td>78</td>
</tr>
<tr>
<td>Austria</td>
<td>8,404</td>
<td>78</td>
<td>2</td>
<td>37</td>
<td>48</td>
</tr>
<tr>
<td>Italy</td>
<td>60,626</td>
<td>547</td>
<td>-47</td>
<td>241</td>
<td>44</td>
</tr>
<tr>
<td>Germany</td>
<td>81,752</td>
<td>663</td>
<td>-190</td>
<td>282</td>
<td>43</td>
</tr>
<tr>
<td>UK</td>
<td>62,499</td>
<td>808</td>
<td>256</td>
<td>235</td>
<td>29</td>
</tr>
<tr>
<td>Denmark</td>
<td>5,661</td>
<td>69</td>
<td>7</td>
<td>13</td>
<td>23</td>
</tr>
<tr>
<td>Belgium</td>
<td>11,001</td>
<td>131</td>
<td>23</td>
<td>16</td>
<td>12</td>
</tr>
<tr>
<td>France</td>
<td>63,128</td>
<td>828</td>
<td>253</td>
<td>77</td>
<td>9</td>
</tr>
<tr>
<td>Spain</td>
<td>46,153</td>
<td>469</td>
<td>86</td>
<td>-42</td>
<td>-9</td>
</tr>
<tr>
<td>Greece</td>
<td>11,310</td>
<td>106</td>
<td>-5</td>
<td>-15</td>
<td>-14</td>
</tr>
<tr>
<td>Total of above</td>
<td>363,224</td>
<td>3,830</td>
<td>420</td>
<td>956</td>
<td>25</td>
</tr>
<tr>
<td>Australia</td>
<td>22,684</td>
<td>298</td>
<td>151</td>
<td>208</td>
<td>70</td>
</tr>
<tr>
<td>Canada</td>
<td>34,484</td>
<td>382</td>
<td>129</td>
<td>209</td>
<td>55</td>
</tr>
<tr>
<td>New Zealand</td>
<td>4</td>
<td>61</td>
<td>31</td>
<td>-3</td>
<td>-5</td>
</tr>
<tr>
<td>United States</td>
<td>309,122</td>
<td>3,999</td>
<td>1531</td>
<td>695</td>
<td>17</td>
</tr>
</tbody>
</table>


Note: US data refer to 2010, Australia, Canada and New Zealand to 2012. Net immigration data not available for US. Admission for permanent settlement figure reduced by 1/3 to allow for return migration.

Increase of ethnic diversity

Immigration to developed countries on this scale has persisted for many years. That has raised the proportion of immigrants in the national population from (usually) small single figures to around 10% in some countries. In England and Wales (UK data are not available in earlier years), successive censuses show that in 1841 0.25% of the population was foreign-born, rising to 2.6% in 1931 and 4.4% in 1951 (Coleman and Salt 1992). In the pre-war days, at least one half of those born abroad had been born in the Empire or the Commonwealth, and would have been British subjects, and prior to 1931 Irish-born people would have been included in the UK. France, exceptional as ever in Western European demography, had been an immigration country since the pre-war period. By 1911 2.8% of its population were born abroad, 5.6% by 1931 and 1954 (mostly in other European countries - about the same as the USA). By 1991 this percentage had risen to 7% in the Netherlands, 7.3% in the UK and France, and 7.9% in the US. By 2010 / 2011, immigrants comprised over 13% of the population in Belgium, England and Wales, Germany, Sweden and Spain and much more in Luxemburg and Switzerland (see Table 2 below). In many countries,
the number of resident immigrants (defined as ‘foreign born’) greatly exceeds the number of resident foreign citizens in any given year, as foreign born residents may in time become citizens of their new countries of residence.

A number of countries estimate and enumerate their populations of foreign origin beyond the ‘first (immigrant)’ generation. As described earlier, in the UK and elsewhere in the ‘Anglosphere’ these estimates come from inviting individuals to specify their ‘ethnic origin’ or ‘ancestry’ in census or survey questions. (In the UK the first such estimate was based on questions of birthplace and parental birthplace in the 1966 sample census). In continental European countries with population registers, parallel estimates are made through registration data on nationality and birthplace of individuals and their parents. In the former, the ethnic ascriptions extend potentially over an unlimited number of generations. In the latter, the ‘third generation’ is assumed to have become ‘native’ (i.e. ‘Danish’, ‘Dutch’ etc.) and disappears from statistical view). For constitutional reasons other jurisdictions – notably France – collect no official ethnic or religious statistics or surrogates for them. The estimate for France in Table 2 is indirect, based on a survey in 1999. In a number of countries for which these data are available around 2010, the population of ‘foreign origin’ or ‘foreign background’ (i.e. both or at least one parent born abroad of foreign nationality) had increased to about 20% of the national total. The proportion is greater in many major cities. For example only 45% of residents of London described themselves as ‘White British’ in the 2011 census, although this category also incorporates race/ethnicity and perhaps nationality, and thus is not purely a measure of ‘foreign background.’

Table 2 - Numbers of foreign citizens and migrants in selected European countries around 2009

<table>
<thead>
<tr>
<th>Year</th>
<th>Pop.</th>
<th>Foreign born and/or parent born abroad</th>
<th>Foreign born</th>
<th>Foreign citizens</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(of data)</td>
<td>(millions)</td>
<td>(millions)</td>
<td>(millions)</td>
</tr>
<tr>
<td>Austria</td>
<td>2011</td>
<td>8.4</td>
<td>n.a</td>
<td>n.a</td>
</tr>
<tr>
<td>Belgium</td>
<td>2007</td>
<td>10.6</td>
<td>n.a</td>
<td>n.a</td>
</tr>
<tr>
<td>Denmark</td>
<td>2011</td>
<td>5.6</td>
<td>0.6</td>
<td>10.2</td>
</tr>
<tr>
<td>Finland</td>
<td>2010</td>
<td>5.4</td>
<td>n.a</td>
<td>n.a</td>
</tr>
<tr>
<td>France</td>
<td>2008</td>
<td>64.0</td>
<td>n.a</td>
<td>n.a</td>
</tr>
<tr>
<td>Germany</td>
<td>2009</td>
<td>81.9</td>
<td>16.0</td>
<td>19.6</td>
</tr>
<tr>
<td>Netherlands</td>
<td>2011</td>
<td>16.7</td>
<td>3.4</td>
<td>20.6</td>
</tr>
<tr>
<td>Portugal</td>
<td>2007</td>
<td>10.6</td>
<td>n.a</td>
<td>n.a</td>
</tr>
<tr>
<td>Spain</td>
<td>2007</td>
<td>44.9</td>
<td>n.a</td>
<td>n.a</td>
</tr>
<tr>
<td>Sweden</td>
<td>2009</td>
<td>8.0</td>
<td>1.7</td>
<td>21.7</td>
</tr>
<tr>
<td>England and Wales</td>
<td>2011</td>
<td>56.1</td>
<td>11.2</td>
<td>20.0</td>
</tr>
</tbody>
</table>

Sources
Projection of the size of future populations of immigrant or minority origin

In this regard, the US Census Bureau has been a pioneer, publishing projections of the population according to race since 1970 and later on according to Hispanic origin and ‘ancestry’ (US Census Bureau, 2012). It is important to remember that in the US the black population is for the most part not of recent immigrant origin.

The UK Office of National Statistics (ONS, then OPCS) published projections of the ethnic minority populations of England and Wales, for the first and only time, in 1979 (OPCS 1979). Regular projections from the statistical offices of Denmark (Statistics Denmark 2012), The Netherlands (Stoeldraijer and Garssen 2011), Norway (Statistics Norway 2010), Sweden (Statistics Sweden 2003; the only one), Canada (Bélanger and Malenfant 2007) and New Zealand (Statistics New Zealand 2010) followed from the 1980s, accompanied by projections from academic sources in Austria (Lebhart and Münz 2004), Germany (Ulrich 2001), Greece (Tsimbos 2008) and the UK (Coleman 2010, Wohland et al. 2010) and from Eurostat (Lanzieri 2011). Continental European projections of ‘foreign origin’ or ‘foreign background’ were based on attributions from register data as noted above, extending over two generations only. The major national origin components – for example Moroccans, Turks, Pakistanis, can be projected separately. Often they are grouped into populations of ‘Western’ or ‘High Human Development Index (HDI)’ origin (mostly European); or ‘Non-Western’ (people of non-European origin) from countries of middle or low HDI (see Coleman 2006). A small number of variant projections are produced, varying by different assumptions about future levels of net migration (inflows and outflows usually being held constant) and fertility (usually converging more or less quickly to a low level.). Migration is the dominant variable in these projections. A selection is presented in Figure 2.

Figure 2 compares results of projections of foreign-origin or ethnic minority populations in selected countries. Only one variant is shown, the central one unless otherwise specified. The UK projection is the highest variant of four, assuming overall net migration as in the latest (2010-based) ONS Principal Projection. (The US projection does not include Black and Native American populations.)

Figure 2
The projections shown in Figure 2 indicate an approximately linear increase of the population size of the minority groups to between 10% and 40% of the national population by the end of the projection period (usually 2050). In these results much depends, of course, on the assumptions. Usually the level of net migration is assumed to remain constant, given the great difficulty of modelling and predicting migration with its diverse origins and processes affecting both immigration and emigration. A few projections have assumed major changes in the trend of migration: e.g. a diminution of migration because of projected economic downturns (Norway and the Netherlands). The favoured variant projection for the UK by Rees and his colleagues, for example, assumes that return migration will increase pro rata with growing minority numbers, leading to markedly slower projected growth of the minority populations than in other variants (Wohland, Rees et al. 2010). More recent projections for Denmark and The Netherlands indicate more modest minority growth than earlier projections, following reductions in immigration partly as a result of restrictive policy initiatives.

The continuation of these trends in low-fertility countries would eventually lead to the majority ethnic group becoming a numerical minority of the national population. (This assumes that the defined groups remain discrete, which may not be a safe assumption, as noted in the following section.) Recent US projections assume that the US will become the first ‘majority minority’ population in the world in about 2043, although in this case the ‘minority’ includes black Americans who are not, for the most part, of recent immigrant origin unlike the rapidly-growing Hispanic population. Thus, in the US, the ‘majority’ is conceived of partly as a racial group (i.e. ‘White’ as opposed to ‘Black’) and partly as an ethnicity (i.e. in contrast with people of Hispanic or Asian origin who may be of any ‘race’).

Few projections of European populations have extended that into the future. The highest-migration projection in a set of variant projections for the UK (assuming the continuation of recent migration levels and a convergence of fertility levels) puts the crossover for the whole country (when the combined population of all ethnic minority groups together would exceed the population of ‘White British’) at around 2070 (Coleman 2010), although it would have occurred in younger age-groups and major urban areas rather earlier than that. But 57 years is a long time in demography. That is looking far into the future and only illustrates the consequence of things remaining as they were in 2010. It assumes, for example, no enduring effect of the current Coalition government’s attempts to reduce net immigration.

A comprehensive analysis made on a common methodology for all the EU countries was published by Eurostat in 2011 (Lanzieri 2011), on four different scenarios or ‘models’. The most conservative of these estimated that 26.5% of the EU population would be of ‘foreign background’ (as defined above) by 2061, the estimate in the highest model being 34.6%. Among individual countries, the lowest estimate overall was for Bulgaria (7%), the highest for Belgium, Germany, Spain and Austria (around 50%). Again, it is important to remember that net migration can, and does, go down as well as up, notably in Germany, the Netherlands and Spain in the last few years and in the UK in the most recent year. According to the Pew Hispanic Center (Passel et al. 2012), net migration from Mexico to the United States has fallen to zero as a consequence of economic trends on each side of the border and more effective enforcement of US migration controls.

**The rise of populations of mixed origins**

So far these projections have been discussed in the context of the demography of discrete groups defined by birthplace and citizenship in population registers or through a process of self-identification with bureaucratically contrived categories (including the opportunity of naming an other, unspecified group). These pre-cast categories, always controversial, are now being challenged by events. As populations with foreign origins increase in number and diffuse away from their original social status and geographical concentration, interethnic unions and marriage have become more common, yielding a growing population of children of ‘mixed origins’. Register-based categories can accommodate this development only with difficulty. But where individuals identify themselves by ethnic group or ancestry, as in the UK and other ‘Anglosphere’ countries’ statistics, data show large numbers people describing themselves as having mixed origins or ancestry.
This heterogeneous category is becoming the fastest growing group in many countries where it can be estimated. In England and Wales in 2001, 672,000 people identified themselves with various ‘mixed’ categories. By 2011, this number had grown to 1,224,000, an increase of 82%, and an annual increase of 6%. The US American Community survey lists over 100 ‘Ancestry’ groups. In the 2000 US census, 163 million people specified one ancestry and 62 million, multiple ancestries, reflecting past intermixture in the American ‘melting-pot’, mostly not inter-racial. Furthermore, individuals may change their identity over time, and parents may describe their children as being different from themselves, in the UK leading to a diffusion into the ‘white’ category from ‘mixed’, for example. If these trends continue, and ‘mixed origin’ increases, in the long run ethnic and racial categories may become increasingly statistically difficult and socially less significant. However, at least in the specific context of the United States, these trends may not always develop in the expected direction. There, rapid immigration over the past decade from Asia and Latin America has apparently slowed the pace of marital assimilation (Qian and Lichter 2007).

Evidence gaps and limitations
Data are lacking or unsatisfactory in many key areas. Mortality and fertility are seldom recorded in terms of ethnic or immigrant origin, other than simply by birthplace of the deceased or of the parents, and information on the former is no longer routinely available from ONS in the UK, for example. To infer fertility among ethnic groups in the UK case, laborious methods such as the ‘own-child’ method, involving a number of assumptions, must be applied to censuses or surveys such as the Labour Force Survey. Other methods give different results. More ingenious indirect methods have used proxy variables such as morbidity to infer ethnic survival differences. Direct information is available for other countries, for example according to ‘race’ and Hispanic origin in the US.

In almost no country are migrants asked about their ethnic identity on arrival. Where population statistics employ ethnic or racial categories, as in the UK and US, ethnic identity of migrants has to be inferred from information on birthplace, parental birthplace, citizenship etc., using information from the census and surveys which shows the probability of persons of given origins having given ethnic identities. In continental European countries with population registers, people of ‘immigrant background’ of various kinds, very roughly equivalent to ethnic groups, are defined on the basis of various combinations of the birthplace and citizenship of individuals and those of their parents. That definition only embraces immigrants themselves and their children born in the country concerned – later generations are assumed, not always based on evidence, to be so integrated that their identities have become indistinguishable from those of the majority ethnicity.

In projection, errors expand with time. Problems are compounded when ethnic or religious components of the population are projected. Many populations of interest with developing country origins have not completed their demographic transition – birth rates are high, and their future fertility trend must be assumed. Their pace of fertility decline is likely to be different in the host country from the country of origin – in either direction. Patterns of inter-ethnic and inter-religious union formation are very important and difficult to predict. Most important of all, international migration – in most cases the biggest determinant of future ethnic population growth – is one of the most volatile of demographic components, subject to multiple economic and political uncertainties.

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Related material

• Migration Observatory briefing - Who Counts as a Migrant? Definitions and their Consequences
www.migrationobservatory.ox.ac.uk/briefings/who-counts-migrant-definitions-and-their-consequences

• Migration Observatory briefing on – The Impact of Migration on UK Population Growth
www.migrationobservatory.ox.ac.uk/briefings/impact-migration-uk-population-growth

Thanks to Professor Ceri Peach for helpful comments and suggestions on this briefing.
The Migration Observatory
Based at the Centre on Migration, Policy and Society (COMPAS) at the University of Oxford, the Migration Observatory provides independent, authoritative, evidence-based analysis of data on migration and migrants in the UK, to inform media, public and policy debates, and to generate high quality research on international migration and public policy issues. The Observatory’s analysis involves experts from a wide range of disciplines and departments at the University of Oxford.

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Recommended citation